INDEX TO VOLUME 47

New names and the final members of new combinations are in **bold face type.**

Abies, 468; balsamea, 466, 467; concolor, 441, 444, 447, 466, 467
Acacia, 326
Acer, glabrum, 441, 447, 556, 561; Negundo, 315; rubrum, 112, 317; saccharinum, 189, 190, 317
Acerates amboyensis, 405
Achillea lanulosa, 446, 448, 452; Millefolium, 109
Acnida cannabina, 535
Aconitum columbianum, 446, 451
Acrochaetium, 6
Actaea arguta, 443; viridiflora, 444
Actinea integrifolia, 562
Aecidium Allenii, 477; **arctoum,** 477; **arcularium,** 478; **Batesii,** 479; **Betheli,** 476; Elaeagni, 477; **indecisum,** 474; **Ixorae,** 473; **Liabi,** 479; **Mesadeniae,** 479; minoense, 477; **Mitellae,** 475; polygalinum, 478; **praecipuum,** 480; Ranunculi, 474; **renatum,** 477; **subsimilans,** 475; zonatum, 476
Agalinis paupercula, 189
Agardhiella tenera, 102
Agastache pallidiflora, 449, 453; urticifolia, 449, 453
Agoseris agrestis, 453
Agropyron Richardsonii, 445, 446, 448, 453
Agrostis airoides, 560; alba maritima, 536; cryptandra, 560; hyemalis, 27, 31, 448; oreophila, 445
Ahnfeldtia plicata, 102
Alcohol, 255
Algitec americana, 397
Allium brevistylum, 451; sibiricum, 452
Alnus, 317; rugosa, 114, 542; tenuifolia, 441, 449, 450
Aloysia ligustrina, 298
Alphitonia, 246
Alsine alpestris, 450; borealis, 450; crassifolia, 450; Curtisii, 446, 451; Jamesiana, 560
Alsinopsis obtusiloba, 557, 560
Alternanthera philoxeroides, 473
Althaea, 326, 327
Amarella heterosepala, 455; scopulorum, 455
Ambrosia artemisiifolia, 111; psilostachya, 312; trifida, 298, 542
Amelanchier, 109, 534; Bakeri, 452; canadensis, 27, 31; oreophila, 452; prunifolia, 452; sanguinea, 189, 190
Ampelopsis arborea, 315
Anagallis arvensis, 109
Anaphalis margaritacea, 189; subalpina, 444, 447, 449
Andromeda glaucophylla, 189; grandifolia, 405; novaecaesareae, 405; Parlatorii, 405
Andropogon furcatus, 120, 306; glaucus, 560; scoparius, 120, 300; Torreyanus, 560
Androsace carinata, 561; pinetorum, 444
Androvettia carolinensis, 398
Anogra coronopifolia, 561
Antennaria viscidula, 447
Antephora axilliflora, 119
Anticlea coloradensis, 444, 446
Antithamnion americanum, 104; cruciatum, 102
Apinus flexilis, 442, 557, 560
Apocynum ambigens, 448, 452; androsaemifolium, 452; cannabinum, 111; scopulorum, 449, 453
Apogamy in Osmunda cinnamomea and O. Claytoniana, 339
Aquilegia coerulea, 445, 448, 452, 556, 560; elegantula, 446
Aragallus deflexus, 446; Richardsonii, 444
Aralia nudicaulis, 443, 445
Araucaria bladensis, 398; brasiliana, 416; Clarkii, 398; Jeffreyi, 398
Arctostaphylos platyphylla, 443; Uva-ursi, 189, 214, 216, 217, 443
Arenaria obtusa, 560
Argentina Anserina, 189
Aristida fasciculata, 560
Aristolochites **Heerii,** 402
Arnica cordifolia, 443; macilenta, 447; pumila, 444; subplumosa, 449; sylvatica, 444
Aronia melanocarpa, 190
Artemisia cana, 454; filifolia, 562; Michauxiana, 452; nova, 454; tridentata, 454; tripartita, 454
ARTHUR, J. C., New species of Uredineae. —XII, 465
Arundinaria, 317
Asclepias latifolia, 561; obtusifolia latifolia, 561; speciosa, 561; tuberosa, 189
Ascophyllum, 105, 108, 528; nodosum, 106

Ascyrum stans, 305
ASHE, W. W., Notes on trees and shrubs of eastern North America, 581
Aspergillus niger, 425
Aspidium cristatum, 127, 129; Filix-mas, 128, 129; spinulosum dilatatum, 128; spinulosum intermedium, 128, 129; Thelypteris, 541
Aspidosperma 411, 416, 418
Asplenium Filix-foemina cyclosorum, 125, 129
Aster adscendens, 447, 449, 453; Canbyi, 451; ciliomarginatus, 449, 453; Geyeri, 446, 448; laevis, 27, 31, 190, 448; novi-belgii, 541; novi-belgii littoralis, 533, 537; paniculatus, 542; puniceus, 190, 541; sagittifolius, 190; subgriseus, 453; subulatus, 530; tenuifolius, 530; Tradescanti, 189; undulatus, 189
Astragalus, 559; mollissimus, 561
Atelophragma aboriginum, 444; Macounii, 446
Atheropogon curtipendulus, 315
Athyrium cyclosorum, 451
Atlantic coastal plain, Contributions to the Mesozoic flora of the, XIII, 397
Atragene columbiana, 443; pseudoalpina, 452, 453; tenuiloba, 444, 446, 449
Atriplex patula hastata, 530
Aucuba japonica, 257
Aulacodiscus oregonus, 71, 72
Auliscus **floridanus**, 67, 72; **hyalinus**, 67, 72; Le Tourneurii, 67; pulvinatus, 67
Avena striata, 443, 445
Azalea arborascens, 582; atlantica, 581, 582; **neglecta**, 581, 582; viscosa, 582

Baccharis halimifolia, 533, 537
Balsam, Canada, 256
Balsamorrhiza sagittata, 452
Bangia fusco-purpurea, 107
Baptisia leucophaea, 300, 306, 312; sphaerocarpa, 312
Batodendron arboreum, 305
Batrachospermum, 1
Berchemia scandens, 315
BERGMAN, H. F., Internal stomata in ericaceous and other unrelated fruits, 213
BERRY, E. W., Contributions to the Mesozoic flora of the Atlantic coastal plain—XIII, 397
Besseya plantaginea, 558, 561
Betula, 317; Andrewsii, 447; fontinalis, 441, 448, 449, 450; glandulosa, 450; papyrifera, 445, 447
Bidens cernua, 189; gracilis, 562; laevis, 539
Bignonia, 326
Bilderdykia Convolvulus, 452
Blitum capitatum, 448
Bocoa provacensis, 77
Boltonia diffusa, 306, 312
Borrichia frutescens, 311
Botrychium Lunaria, 443; neglectum, 443, 445; silaifolium, 127, 445; simplex, 125, 126, 129, 445; virginianum, 445
Bouteloua, 120
BOYER, C. S., Rare species of North American Diatomaceae, 67
Brachyphyllum macrocarpum formosum, 398
Brickellia grandiflora, 478
Bromus ciliatus, 448; polyanthus, 448; Richardsonii, 445
BROWN, E. D. W., Apogamy in Osmunda cinnamomea and O. Claytoniana, 339
BROWN, F. B. H., The refraction of light in plant tissues, 243; The silicious skeleton of tracheids and fibers, 407
Brunnichia cirrhosa, 303
Bryonia, 326, 327
Bryopsis plumosa, 103, 104, 106
Bryum lycopodioides, 378; parasiticum, 382
Buchloë dactyloides, 119
Buffalo-grass, The diecious nature of, 119
Bulbilis dactyloides, 119–124

Cacalia atriplicifolia, 80; reniformis, 480
Cactus, 556
Caesarea, 411, 416
Cakile edentula, 111
Calamagrostis canadensis, 448, 450, 541; luxurians, 448; Scribneri, 444
Callicarpa americana, 305, 309
Callithamnion, 103; Baileyi, 104; byssoideum, 524; corymbosum, 524; roseum, 104; tetragonum, 104
Calothrix, 107
Caltha rotundifolia, 451
Calymperaceae of North America, 367
Calymperes, 367, 385; androgynum, 370; asperipes, 393; Breutelii, 386; Brittoniae, 389; Carionis, 390; **cubense**, 385–387, 396; disciforme, 386, 389, 396; Donnellii, 386, 389, 397; Dozyanum, 388; emersum, 386, 388, 396; filigera, 384; **fluviatile**, 385, 386, 394, 396; Gardneri, 368; guadalupense, 386, 392; Guildingii, 386, 392, 396; Heribaudi, 386, 391, 396; hexagonum, 387; Hobsoni, 372; Hookeri, 387; Levyanum, 386, 394, 396; lonchophyllum, 385, 386, 393, 396; **Nashii**, 386, 391, 396; nicaraguense, 386, 390, 391, 396; panamae, 387; parasiticum, 382; portoricense, 389; Richardi, 386, 389, 392, 396; rufescens, 389; tenuifolium, 377; Wulfschlaegelii, 389
Campanula aparinoides, 189; rotundifolia, 189, 190

Canada balsam, 256
Canna, 213, 214, 216, 217
Cantua longiflora, 561
Capnoides Brandegei, 453
Capriola Dactylon, 312
Cardamine cordifolia, 451; infausta, 451; pennsylvanica, 450
Cardiospermum Halicacabum, 315
Carduus lanceolatus, 190
Carex hormathodes, 537; silicea, 109; stricta, 541; umbellata, 27, 31
CAREY, C. L., A method of preparation and some properties of a starch gel, 455
Carpinus caroliniana, 303
Carpolithus **bladenensis,** 406; **carolinensis,** 405
Carya, 112
Castagnea virescens, 104
Castalia odorata, 190, 539
Castanea dentata, 113.
Castilleja coccinea, 190; cognata, 446; confusa, 447; Crista-galli, 446, 449, 453; flava, 454; lancifolia, 448, 452; occidentalis, 558, 561; rhexifolia, 447, 449, 453; sulphurea, 449, 451; trinervis, 447
Ceanothus americanus, 189; Fendleri, 443; velutinus, 443, 452
Cedrela, 416
Celastrophyllum crenatum, 404; undulatum, 404
Cell-division of the pollen-mother-cell of Cobaea scandens alba, 325
Celtis, 315; occidentalis, 533; reticulata, 560
Centella repanda, 312
Cephalanthus occidentalis, 305, 542
Cephalotaxospermum carolinianum, 398
Ceramium, 6; fastigiatum, 524; rubrum, 102–104, 106; strictum, 102, 104, 106; tenuissimum, 102
Cercis canadensis, 303
Cercocarpus ledifolius, 447, 451; montanus, 452
Chaetochloa, 312
Chaetomorpha, 106; Linum, 104
Chamaebatiaria Millefolium, 452
Chamaecrista fasciculata, 306, 312
Chamaecyparis, 544
Chamaedaphne calyculata, 189
Chamaepericlimenum canadense, 443
Champia parvula, 102, 104
Chantrasia virgatula, 524
Chara, 190, 425–430
Chelone glabra, 189
Chenopodium Botrys, 448; Fremontii, 449
Chimaphila occidentalis, 443; umbellata, 189
Chionophila Jamesii, 558, 561
Chondria dasyphylla, 104; tenuissima, 104
Chondrophora nudata, 306
Chondrophyllum Nordenskioldi, 399
Chondrus crispus, 102, 104
Chorda Filum, 102, 104
Chordaria flagelliformis, 104
Chroococcus, 532
Chrysanthemum Leucanthemum, 109
Chrysopsis graminifolia, 306
Chrysothamnus filifolius, 454
Cicuta bulbifera, 189; maculata, 537, 541
Cinna latifolia, 443
Cinnamomum Heerii, 404
Circaea pacifica, 450
Cirsium horridulum, 533
Citrophyllum aligerum, 403
Cladium mariscoides, 189, 537
Cladonia, 188
Cladophora, 103; albida refracta, 104; arcta, 104; expansa, 528, 532; gracilis, 104; lanosa, 104; rupestris, 104
Cladostephus verticillatus, 102
Claytonia virginica, 448
Clethra alnifolia, 534, 542
Clinopodium vulgare, 542
Clintonia borealis, 190
Cobaea, 327; scandens, 325, 328; scandens alba, 325–338
Cobaea scandens aba, Cell-division of the pollen-mother-cell of, 325
Coeloglossum bracteatum, 443
Coleosanthus albicaulis, 453; grandiflorus, 478; umbellatus, 453
Collinsia parviflora, 446, 452
Comandra umbellata, 27, 31
Comptonia asplenifolia, 189, 190
Conioselinum coloradense, 446
Conjugation of Spirogyra ternata, Studies in the, 9
Connecticut, The vegetation of—VI, 89; VII, 511
Convolvulus spithamaeus, 26
Corallina officinalis, 102, 104
Corallorhiza multiflora, 443; ochroleuca, 451; Vreelandii, 451
Corn, Inheritance of sugar and starch characters in, 137
Cornophyllum obtusatum, 405
Cornus, 317; Amomum, 542; florida, 303, 305, 309
Cracca spicata, 306
Crataegus, 311, 315; berberifolia, 303; macrosperma, 189
Crepis, 326
Crinum asiaticum, 214, 216, 219
Cristatella Jamesii, 560
Croton capitatus, 300, 303, 309, 312, 315
Cryptocarpus, 283; Curtisii, 284
Cucurbita Pepo, 326
Cunninghamites elegans, 398
Cuscuta arvensis, 312; europaea, 216
Cycadinocarpus circularis, 398

Cymodocea, 563; antarctica, 565, 569
Cyperus esculentus, 476; Nuttallii, 536
Cypripedium acaule, 26
Cyrilla racemiflora, 305
Cystoclonium purpurascens, 102
Cystopteris fragilis angustata, 127, 129
Cytherea bulbosa, 443

Dactylis glomerata, 448
Dahlia, 326
Dalea, 558; formosa, 561; Jamesii, 561
Dammar, 256
Dammara borealis, 398
Danthonia spicata, 27, 31, 109, 189, 445
Dasiphora fruticosa, 189, 447, 450, 451
Dasya elegans, 102
Dasyspora aspera, 472
Dasystephana affinis, 455; Forwoodii, 455; Parryi, 453
Datura, 231, 232; laevis, 231; Stramonium, 231–241
Datura Stramonium, Microsporogenesis in, 231
Daubentonia longifolia, 300, 303, 309, 311, 315
Delesseria sinuosa, 102
Delphinium Barbeyi, 446; elongatum, 449; Nelsonii, 448; ramosum, 449; robustum, 449
Deschampsia flexuosa, 109
Desmarestia aculeata, 102; viridis, 102
Dewalquea groenlandica, 402
Diatomaceae, Rare species of North American, 67
Dicranum Berterianum, 373
Didymodon campylocarpus, 384
Diervilla Diervilla, 189, 190; Lonicera, 26, 27, 31
Dimerogramma fulvum, 67; **intermedium**, 67, 72; marinum, 68; minus, 67
Diodia teres, 306; virginiana, 306, 312
Diospyros primaeva, 405
Diplanthera, 563
Disporum trachycarpum, 444, 446, 448, 451, 453
Distegia involucrata, 445, 450
Distichlis spicata, 529, 544
Distribution of the marine spermatophytes, Geographical, 563
Doryanthites cretacea, 399
Draba Helleriana, 453; spectabilis, 453
Dracaena aurea, 253, 254
Drosace carinata, 557, 561
Drosera, 336
Drymocallis corymbosa, 448, 452; fissa, 444, 446; glandulosa, 452
Dulichium arundinaceum, 189

Echinochloa Walteri, 530
Ectocarpus, 103, 106; confervoides, 104; siliculosus, 104
Edwinia americana, 445, 448, 452, 560; macrocalyx, 452
Elaeagnus angustifolia, 477; argentea, 477; glabra, 477
Eleocharis acicularis, 450; palustris, 450, 536; rostellata, 536; tenuis, 189
Elephantella groenlandica, 450
Elodea, 539; canadensis, 425–430
Elymus, 542; glaucus, 445, 448, 450
Enalus, 563
Encalypta parasitica, 382
Enteromorpha, 107, 108, 532, 535, 545; clathrata, 106, 107, 524, 525, 528; intestinalis, 106, 107; minima, 107; prolifera, 107
Epigaea repens, 27, 189, 214
Epilobium angustifolium, 32, 189, 190; lineare, 189
Equisetum arvense, 111, 540
Ericaceous and other unrelated fruits, Internal stomata in, 213
Erigeron canadensis, 27, 31, 32; conspicuus, 446; droebachiensis, 445, 448; incanescens, 453; macranthus, 446, 448, 452; ramosus, 190; Smithii, 453; speciosus, 446; subtrinervis, 447; superbus, 444, 449; yellowstonensis, 447, 449
Eriogonum, 558; cernuum, 454; Jamesii, 560; tenellum, 560; umbellatum, 560
Erxlebenia minor, 443
Eryngium Leavenworthii, 312; ludovicianum, 306; yuccifolium, 312
Eucalyptus attenuata, 404; Geinitzi, 404; linearifolia, 404
Eucephalus formosus, 447; glaucus, 447, 449, 453; wasatchensis, 447
Eunotia americana, 69; **Stevensonii**, 69, 72
Eupatorium compositifolium, 300, 309; Mohrii, 306; perfoliatum, 541; purpureum, 541; rotundifolium, 306; semiserratum, 306; serotinum, 312; tortifolium, 306
Euphorbia, 558; corollata, 306; hexagona, 312; maculata, 306, 312; marginata, 298, 309, 312, 315
Euthamia lanceolata, 312

Fagus grandifolia, 113, 305, 317
FARR, W. K., Cell-division of the pollen-mother-cell of Cobaea scandens alba, 325
Fendlera falcata, 452
Ferns from Montana, Unreported, 125
Festuca octoflora, 109; rubra, 109, 448; sororia, 446; subulata, 445
Fibers, The silicious skeleton of tracheids and, 407
Ficus aligera, 403; atavina, 401; crassipes, 401; daphnogenoides, 400; inaequalis, 400; ovatifolia, 401; Stephensoni, 401

Filix fragilis, 448
Fragaria americana, 445, 448; bracteata, 445, 448; glauca, 446, 449, 453; virginiana, 189
Frankenia Jamesii, 561
Froelichia campestris, 300
Fruits, Internal stomata in ericaceous and other unrelated, 213
Fucus, 105, 107, 108, 528; platycarpus, 106; vesiculosus, 106
Fuligo, 335, 337

Gaillardia pinnatifida, 562
Galium boreale, 445, 452; Claytoni, 541; flaviflorum, 447, 449, 451; subbiflorum, 450
Galpinsia lavandulaefolia, 561
Gaultheria humifusa, 443; procumbens, 27, 31, 189, 214, 216, 217
Gaura Lindheimeri, 312; parvifolia, 561
Gaylussacia baccata, 27, 31, 32, 109, 214, 216, 534; frondosa, 214, 216
Gel, A method of preparation and some properties of a starch, 455
Gentiana Saponaria, 189
Geographical distribution of the marine spermatophytes, 563
Geranium caespitosum, 556, 561; Richardsonii, 446, 448; viscosissimum, 445, 448
Gerardia maritima, 536
Geum decurrens, 451; oregonense, 450; rivale, 450
Gilia aggregata, 452; longiflora, 561; pulchella, 452
GLEASON, H. A., Some applications of the quadrat method, 21
Gleditsia triacanthos, 315
Gledsiophyllum triacanthoides, 403
Glottidium vesicarium, 312
Glycerine, 255; jelly, 255
Glycosma occidentalis, 446, 448, 452
Glyphodesmis **campechiana**, 68, 72; **tumida**, 68, 72; Williamsonii, 68
Gnaphalium decurrens, 27, 31
Gracilaria multipartita, 104
GRAFF, P. W., Unreported ferns from Montana, 125
Griffithsia Bornetiana, 102
Grinnellia americana, 102, 104
Guaiacum, 416, 418

Halodule, 563
Halophila, 563, 564, 567; ovalis, 569–571, 576; ovata, 570
Hamamelis, 326; virginiana, 113
Harbouria trachypleura, 446
HARPER, R. A., Inheritance of sugar and starch characters in corn, 137
HARPER, R. M., A week in eastern Texas, 289
HAYNES, C. C., Illustrations of six species of Riccia, with the original descriptions, 279
Hedera primordialis, 405
Hedysarum boreale, 444; marginatum, 446; utahense, 453
Helenium tenuifolium, 300, 303, 306, 309, 312, 315
Helianthella Parryi, 447, 453; quinquenervis, 449
Helianthemum canadense, 189
Helianthus, 312, 559; angustifolius, 306; annuus, 298; giganteus, 533
Heracleum lanatum, 114, 445, 450
Hesperidanthus linarifolius, 453
Hesperis, 326
Hesperochloa Kingii, 452
Heteranthera dubia, 538
Heterisia Mertensiana, 472
Heteropleura Fendleri, 453
Heuchera bracteata, 453, 557, 560; Hallii, 453; parvifolia, 446, 453; utahensis, 453
Hibiscus Moscheutos, 538, 541
Hicoria, 416; alba, 303, 305, 308; Pecan, 298, 308, 315
Hieracium, 326; albiflorum, 443; paniculatum, 27; scabrum, 189, 190; venosum, 27, 31, 189, 190
Hierochloë odorata, 533, 537
Hildenbrandtia Prototypus, 102–104, 106
Hoffmannseggia Jamesii, 560
Homalobus decurrens, 453; oblongifolius, 446; tenellus, 449; tenuifolius, 453
HOWE, M. A., Observations on monosporangial discs in the genus Liagora, 1
Hydrophyllum capitatum, 452; Fendleri, 449, 453
Hypericum aspalathoides, 305; formosum, 446, gentianoides, 109

Ibidium cernuum, 189
Ilex decidua, 315; opaca, 305, 309; verticillata, 542; vomitoria, 294, 305, 309, 315
Illustrations of six species of Riccia, with the original descriptions, 279
Impatiens biflora, 541
Inocarpus edulis, 77
Inula ericoides, 562
Ipomoea, 326
Iris prismatica, 537; versicolor, 541
Isocoma pluriflora, 561
Iva oraria, 533, 536, 537
Ixora ferrea, 474

Jack Pine Plains of Michigan, Notes on the, 187
James, Edwin P., on Long's Expedition, 555–562
Jamesia americana, 560

Juglans arctica, 400
Juncus brevicaudatus, 189, 541; canadensis, 189; effusus, 541; Gerardi, 109, 528, 529, 544; truncatus, 451
Juniperus procera, 255; virginiana, 109, 317, 533
Jussiaea californica, 476; grandiflora, 312

Kalmia Brittoniana, 405; latifolia, 113, 214, 216; microphylla, 450
Krigia virginica, 189

Laciniaria, 189; acidota, 306; pycnostachya, 306
Lactuca canadensis, 27, 31, 189
Laminaria, 90; Agardhii, 101, 102; digitata, 102
Lappula, 559; floribunda, 452
Lathyrus, 326; arizonicus, 446, 449, 453; brachycalyx, 449; laetevirens, 446, 453; leucanthus, 446, 449, 453; maritimus, 109, 111
Laurophyllum elegans, 404
Leathesia difformis, 104
Ledum groenlandicum, 189, 190
Leersia oryzoides, 539
Leguminosites robiniaefolia, 403
Lepargyraea canadensis, 442
Leptilon canadense, 189
Leucelene ericoides, 562
Liabum, 479
Liagora, 1–8; ceranoides, 2–5, 7, 8; elongata, 3; farinosa, 2, 3, 5, 8; pinnata, 2, 5, 8; pulverulenta, 3; Turneri, 2, 3; valida, 2, 3, 5, 7, 8
Liagora, Observations on monosporangial discs in the genus, 1
Light in plant tissues, The refraction of, 243
Ligusticum affine, 446; brevilobum, 446, 453; Porteri, 446; tenuifolium, 446
Lilaeopsis lineata, 538
Lilium montanum, 446, 448, 453; superbum, 537, 541
Limnorchis borealis, 450; purpurascens, 451; stricta, 450; viridiflora, 450
Limonium carolinianum, 530–532, 534, 536
Limosella aquatica, 538
Linnaea americana, 443
Linosyris pluriflora, 561
Linum floridanum, 306; Lewisii, 4452
Lippia, 312; myriocephala, 470; urticoides, 470
Liquidambar Styraciflua, 303, 305, 308, 315
Liriodendron, 317; dubium, 403; primaevum, 403
Lithophragma bulbifera, 452; parviflora, 452
Lobelia cardinalis, 542; spicata, 189
Lomentaria uncinata, 102, 104
Long Expedition of 1820, Rocky Mountain botany and the, 555
Lophotocarpus spongiosus, 538
Lupinus, Studies in the genus—V, 487
Lupinus, 487–509, 556; alpestris, 446; argenteus, 560; arizonicus, 487, 488, 495; Benthami, 488, 505, 506; Benthami **opimus**, 506, 507; citrinus, 488, 507, 508; concinnus arizonicus, 487, 488, 495; decumbens, 556, 560; deflexus, 488, 508; floribundus, 449, 453; hirsutissimus, 487–489; humicola, 446, 449; leptophyllus, 487, 488, 505; parviflorus, 449, 453; Pondii, 488, 501; pulcherrimus, 446, 449; sparsiflorus, 487–489, 491, 492, 495; sparsiflorus **arizonicus**, 492, 495; sparsiflorus **barbatulus**, 492, 494, 495, 497, 498; sparsiflorus **inopinatus**, 494, 499, 500, 502; sparsiflorus **insignitus**, 495, 499; sparsiflorus **Pondii**, 494, 501; sparsiflorus **setosissimus**, 495, 496; subhirsutus, 488, 491, 492; tenellus, 448, 452; truncatus, 487, 488, 502, 503; truncatus **Burlewi**, 505
Lycopersicum, 261–269
Lycopodium clavatum, 188, 189; complanatum, 188, 189
Lycopus, 541
Lyngbya, 532
Lysiella obtusata, 443
Lysimachia terrestris, 541
Lythrum lanceolatum, 312

MACDOUGAL, D. T., The physical factors in the growth of the tomato, 261
Machaerium Whitfordii, The wood of, 73
Machaerium Moritzianum, 73; sordidum, 73; Whitfordii, 73–79
Macronema obtusum, 453
Magnolia, 326, 327; Capellinii, 402; glauca, 303, 305, 309, 317; grandiflora, 305, 308, 309; Newberryi, 403
Maianthemum, 218
Maize, A misconception as to the structure of the ear of, 359; Inheritance of sugar and starch characters in corn, 137
Malapoenna horrelleniss, 404
Manihotites georgiana, 404
Marine spermatophytes, Geographical distribution of the, 563
Marshallia graminifolia, 306
MCATEE, W. L., Notes on the Jack Pine Plains of Michigan, 187
McLean's solution, 256
Melampsora alpina, 468; **americana**, 465–468; arctica, 467, 468
Melampyrum lineare, 26, 189, 190
Melica bella, 452
Melobesia Lejolisii, 524; pustulata, 104

Melosmon laciniatum, 561
Menispermites cyclophyllum, 403
Mentzelia, 559
MERRIMAN, M. L., Studies in the conjugation of Spirogyra ternata, 9
Mertensia alpina, 557, 561; ciliata, 446, 451, 558, 561; lanceolata, 453
Mesadenia atriplicifolia, 480; lanceolata, 312; reniformis, 480
Mesogloia divaricata, 104
Mesosphaerum rugosum, 306
Mesozoic flora of the Atlantic coastal plain, Contributions to the—XIII, 397
Michigan, Notes on the Jack Pine Plains of, 187
Micranthes arguta, 443
Microcoleus, 532
Microsporogenesis in Datura Stramonium, 231
Mikania scandens, 542
MILLER, R. B., The wood of Machaerium Whitfordii, 73
Mimosa strigillosa, 312
Mimulus Langsdorfii, 450; Lewisii, 450; moschatus, 450
Mirabilis, 326
Mitella nuda, 475
Moehringia lateriflora, 448, 452; macrophylla, 448, 452
Moldavica parviflora, 449, 453
Moneses uniflora, 443
Monosporangial discs in the genus Liagora, Observations on, 1
Monotropa Hypopitys, 214, 216; uniflora, 214–216, 218, 443
Montana, Unreported ferns from, 125
Moriconia americana, 398
Morus rubra, 303
Muhlenbergia sylvatica, 480
Myosotis, 559; suffruticosa, 561
Myrica carolinensis, 109, 533; cerifera, 305, 309; cliffwoodensis, 400; elegans, 400; pumila, 305, 311
Myriophyllum, 190
Myroxylon toluifera, 257
Myrsine borealis, 405; Gaudini, 405

Nabalus racemosus, 450
Najas flexilis, 190, 539
Nama corymbosum, 306, 312
Naphthalene α monobromated, 257
Navicula Attwoodii, 69, 72
Negundo Kingii, 450
Nemalion multifidus, 103, 104, 106
Neptunia lutea, 312
NICHOLS, G. E., The vegetation of Connecticut—VI, 89; VII, 511
Nicotiana Tabacum, 325, 327, 328, 333, 335, 336
Nitzschia **semicostata**, 70, 72; subcostata, 70
North Carolina, Contributions to the Mesozoic flora of the Atlantic coastal plain—XIII, 397
Notes on trees and shrubs of eastern North America, 581
Notholaena Fendleri, 444
Nymphaea advena, 190, 539
Nyssa, 317; biflora, 305, 308; sylvatica, 303, 308, 533; uniflora, 308

Ochroma lagopus, 416
Odostemon Aquifolium, 443
Oenothera, 326; biennis, 189; coronopifolia, 561; Jamesii, 561; lavendulaefolia, 561; linearis, 537; muricata, 111
O'NEAL, C. E., Microsporogenesis in Datura Stramonium, 231
Onoclea sensibilis, 541
Operculina turpethum, 473
Ophioglossum vulgatum, 126, 127, 129
Ophrys nephrophylla, 443; nidus-avis, 216
Opulaster alternans, 452; glabratus, 445, 448; monogynus, 448, 452, 560
Opuntia Engelmannii, 298; vulgaris, 109
Oreobatus deliciosus, 452, 560
Oreocarya from Colorado, A new, 211
Oreocarya, 559; affinis, 211; **procera**, 211; suffruticosa, 561
Oreochrysum Parryi, 447
Oreoxis humilis, 557
Orontium aquaticum, 539, 540
Oryzopsis asperifolia, 443; Bloomeri, 443; micrantha, 446, 453; pungens, 26
Oscillatoria, 532
Osmorrhiza intermedia, 444, obtusa; 443, 446
Osmunda cinnamomea and O. Claytoniana, Apogamy in, 339
Osmunda cinnamomea, 339, 341–344, 541; Claytoniana, 339, 342, 343, 345; regalis, 339–341, 343
OSTERHOUT, G. E., A new Oreocarya from Colorado, 211; Rocky Mountain botany and the Long Expedition of 1820, 555
Ostrya virginiana, 309
Oxybaphus multiflorus, 560
Oxycoccus macrocarpus, 213, 215, 218–220
Oxypolis Fendleri, 449
Ozomelis Parryi, 444; stauropetala, 443; stenopetala, 444

Pachystima Myrsinites, 443
Panicularia nervata, 450; pauciflora, 451
Panicum boreale, 27, 31; depauperatum, 26; huachucae, 452; virgatum, 533, 537; xanthophysum, 27, 31
Parnassia, 326; caroliniana, 189; fimbriata, 450; rivularis, 451
Paronychia Jamesii, 560

Parosela formosa, 561; Jamesii, 561
Paspalum, 312
Passiflora, 327
Pectis angustifolia, 562
Pedicularis bracteosa, 450; canadensis, 445, 452; crenulata, 447, 453; Grayi, 449, 451; Parryi, 447; racemosa, 446
Peltandra virginica, 539
Penicillium glaucum, 425
Penicillus, 411
Penstemon, 559; alpinus, 557, 561; ambiguus, 561; coccineus, 558; cyathophorus, 454; Jamesii, 559, 561; Leonardi, 453; Rydbergii, 453; secundiflorus, 444; strictus, 453; teucrioides, 454; Torreyi, 453, 558, 561; unilateralis, 453; virens, 444, 453; xylus, 454
Peperomia, 327
Peramium decipiens, 443; ophioides, 443
Petalostemon, 298
Phacelia ciliata, 453; integrifolia, 561; sericea, 452; tanacetifolia, 472
Phalaris arundinacea, 542
Phaseolites formus, 403
Phleum alpinum, 445, 448
Phragmites communis, 538, 541; Pratti, 399
Phyla cuneifolia, 561
Phyllitis fascia, 103, 104, 106
Phyllophora Brodiaei, 102; membranifolia, 102
Phyllospadix, 563–565, 569, 575
Phymosia Crandallii, 451; grandiflora, 451; rivularis, 451
Physalis lobata, 561
Physical factors in the growth of the tomato, The, 261
Phytogeographical notes on the Rocky Mountain region—IX, 441
Picea Engelmannii, 441, 444; Parryana, 441, 444
Picris hieracioides, 189, 190
Pilobolus, 335, 337
Pinnularia **Hagelsteinii**, 69, 72
Pinus Banksiana, 187, 189; echinata, 303, 308; flexilis, 441, 560; Lambertiana, 259; Murrayana, 441, 442; palustris, 304, 305, 308; radiata, 472; raritanensis, 398; resinosa, 27; rigida, 112; scopulorum, 441, 442; serotina, 582; Strobus, 414, 416, 424; Taeda, 303, 305, 307, 308, 311, 582
Piperia unalaschensis, 443
Pisonia cretacea, 402
Pistia Nordenskioldii, 399
Plagiogramma Loczyi, 68
Planera aquatica, 309; cretacea, 400
Plantago decipiens, 109, 530, 534, 537; eriopoda, 561; major, 218
Platanus occidentalis, 308, 317
Pleuraphis Jamesii, 560
Pluchea camphorata, 536; foetida, 306
Plumaria elegans, 102
Poa compressa, 27, 31, 109, 443; crocata, 445, 448; leptocoma, 450; longipedunculata, 446; Olneyae, 443; pratensis, 109; reflexa, 448, 451, 453; rupicola, 453; tricholepis, 444; Vaseyana, 446
Podophyllum, 327
Podozamites Knowltoni, 398; lanceolatus, 398
Polemonium albiflorum, 453; Archibaldae, 446; delicatum, 446; foliosissimum, 446, 449; molle, 446; occidentale, 446; pulcherrimum, 471; robustum, 446
Pollen-mother-cell of Cobaea scandens alba, Cell-division of the, 325
Polygala longa, 478; mariana, 306; Senega 478
Polygonella articulata, 189
Polygonum acre, 539; amphibium, 189; arifolium, 541; aviculare littorale, 536; Engelmannii, 453; exsertum, 536; sagittatum, 541; scandens, 111
Polyides rotundus, 102
Polypodium hesperium, 446
Polysiphonia, 103; elongata, 102; fastigiata, 104, 106; fibrillosa, 104; Harveyi, 524; nigrescens, 102; Olneyi, 524; urceolata, 104; variegata, 104; violacea, 104
Polystichum Lonchitis, 445; munitum, 125, 126, 129
Pontederia cordata, 539
Populus, 317; acuminata, 447; angustifolia, 441, 447, 448, 560; aurea, 444; balsamifera, 441, 447; grandidentata, 24, 27, 188, 190; Sargentii, 447; tremuloides, 24, 188, 190, 444, 445
Porphyra laciniata, 106
Posidonia, 563; oceanica, 564
Potamogeton, 535, 539; amplifolius, 190; foliosus, 190; heterophyllus, 190; interruptus, 190; natans, 190; pectinatus, 190, 534; perfoliatus, 190
Potentilla, 326; glaucophylla, 453; jucunda, 446; pacifica, 536
Prenanthes pauciflora, 562; tenuifolia, 562
Primula, 326; angustifolia, 557, 561; Parryi, 444; sinensis, 325
Prosopis glandulosa, 298
Prosopodium, 470
Proteoides crassipes, 401
Protoplasmic streaming, The effect of zinc sulphate on, 425
Prunella vulgaris, 448
Prunus allegheniensis, 581; maritima, 109; pennsylvanica, 190; pumila, 190; virginiana, 189, 190
Psedera quinquefolia, 109
Pseudocymopterus montanus, 446; multifidus, 446; sylvaticus, 446; tenuifolius, 446

Pseudotsuga mucronata, 441, 442, 444, 447
Pteris aquilina, 27, 29, 31, 189, 190, 443
Pterospermites carolinensis, 404; crednerae folia, 404
Pterospora Andromedea, 443
Ptilimnium capillaceum, 537
Ptiloria pauciflora, 562; tenuifolia, 562
Puccinellia fasciculata, 530
Puccinia aspera, 471; aucta, 471; canaliculata, 476; caulicola, 476; Eatoniae, 474; **gulosa,** 470; **Heterisiae,** 471; **hiascens,** 471; **offuscata,** 469, 470; peruviana, 470; Polemonii, 471; **proximella,** 471; **senilis,** 470; Stipae, 479; subdecora, 478; Zorniae, 469
Pucciniastrum **americanum,** 468, 469; arcticum, 468, 469; arcticum americanum, 468
Pulmonaria alpina, 561; ciliata, 561
Punctaria latifolia, 104, 523
Pylaiella littoralis, 103, 104, 106
Pyrola asarifolia, 443; chlorantha, 443; elliptica, 443; picta, 443
Pyrus, 246; arbutifolia atropurpurea, 109; melanocarpa, 534

Quadrat method, Some applications of the, 21
Quamoclidion multiflorum, 560
Quercus, 411; alba, 189, 303, 305, 308, 317; bicolor, 533; falcata, 303, 305, 308; hybrida, 308; laurifolia, 305, 308; marylandica, 300, 303; Michauxii, 305, 308; nigra, 303, 308, 315; pagodaefolia, 308; Phellos, 303, 308; Pratti, 400; pseudowestfalica, 400; rubra, 27, 31, 113; stellata, 300, 303, 308, 533; velutina, 112, 189; virginiana, 315
Quincula lobata, 561
Quinidine, 257

Ralfsia clavata, 104, 106
Ramischia secunda, 443
Ranunculus Bongardi, 448, 450; californicus, 474; Cymbalaria, 538; Douglasii, 448, 450; Earlei, 449, 451; micranthus, 445
Ratibida Tagetes, 558, 562
Razoumofskya americana, 443; Douglasii, 443
Refraction of light in plant tissues, The, 243
Regeneration in Sphaerocarpos Donnellii, 347
Rhexia mariana, 306
Rhizoclonium, 106, 107, 528
Rhodomela Rochei, 102
Rhodymenia palmata, 102
Rhus copallina, 309, 534; glabra, 27, 31, 303; radicans, 315; Toxicodendron, 109, 305, 534; typhina, 109, 534
Ribes, 326, 327; coloradense, 445, 448; viscosissimum, 443, 445, 447; Wolfii, 445, 448
Riccia, Illustrations of six species of, with the original descriptions, 279
Riccia arvensis, 279, 282, 286; arvensis hirta, 282, 283; Austini, 282; Beyrichiana, 279–281, 283, 286; bifurca, Bischoffi, 282, 283; ciliata, 283; Curtisii, 279, 283–285, 287; dictyospora, 279, 280, 286; Donnellii, 279, 285; hirta, 279, 283, 287; hortorum, 281; lamellosa, 282; Lescuriana, 279, 281, 283; Lescuriana cruciata, 282; Lescuriana trichotoma, 282; Michelii, 281–283; palmata, 282, 283; paradoxa, 283; tumida, 281
RICKETT, H. W., Regeneration in Sphaerocarpos Donnellii, 347
Rocky Mountain botany and the Long Expedition of 1820, 555
Rocky Mountain region, Phytogeographical notes on the—IX, 441
Rosa, 45–66; acicularioides, 56–58, 63, 64, 66; acicularis, 55–58, 64, 66; aciculata, 452; acuminata, 55; arkansana, 55, 56; Bicknellii, 50, 55, 64, 66; blanda, 51–53, 56–59, 61, 64, 66; blanda glabra, 59; blanda Willmottiana, 53; Bourgeauiana, 56, 57, 445; bracteata, 47, 311; canina, 48, 49; carolina, 50–55, 63–66, 114, 542; carolinensis, 53; caroliniana, 54; centifolia, 48; cinnamomea, 60, 61; dasistema, 49, 51, 65, 66; dumetorum, 48, 49; Engelmannii, 56, 57, 445, 448; fraxinifolia, 59; gallica, 48; gemella, 49, 51; grandiflora, 54; humilis 50, 53, 54, 109, 534; humulis grandiflora, 54; humilis villosa, 53; illinoensis, 62; johannensis, 56, 60, 65, 66; laxa, 54; Lindleyana, 54; Lindleyi, 54; lucida, 50, 52, 53, 59; lutescens, 62; Lyoni, 50, 53, 65, 66; majalis, 57, 61; manca, 452; melina, 445, 448, 452; micrantha, 48, 49; multiflora, 46, 47; nanella, 49, 50, 52, 64, 66; nitida, 50, 52, 55, 63, 65, 66; obovata, 50, 54; palustriformis, 56, 61; palustris, 49–51, 58, 61–66; parviflora, 50, 54; parviflora glandulosa, 55; parviflora setigera, 55; pendulina, 60; pennsylvanica, 54; pimpinellifolia, 60–62; pratensis, 54; pusilla, 53; rapa, 53; rubifolia, 46, 47; rubiginosa, 48; rugosa, 56, 58; Sayi, 57; serrulata, 50, 54, 65, 66; setigera, 46, 47; Solanderi, 58; spinosissima, 56, 60–62; subblanda, 56, 59; suffulta, 55, 56; virginiana, 49–55, 58, 59, 64–66; virginiana lucida, 53; Williamsii, 56, 60; Woodsii, 445, 448
Rosaceae, Notes on—XII, 45

Rubacer parviflorum, 445, 447, 451
Rubus, 559; allegheniensis, 27, 31; Chamaemorus, 468; deliciosus, 560; melanolasius, 445, 447, 451, 469; occidentalis, 468, 469; pubescens, 442 468, 469; stellatus, 468; strigosus, 469; triflorus, 468
Rudbeckia ampla, 451; hirta, 306, 479; Tagetes, 558, 562
Ruellia humilis, 306
Rumex Acetosella, 27, 31, 109; Brittanica, 541; subalpinus, 451
Ruppia maritima, 534
RUSK, H. M., The effect of zinc sulphate on protoplasmic streaming, 425
RYDBERG, P. A., Notes on Rosaceae—XII, 45; Phytogeographical notes on the Rocky Mountain region—IX, 441
Rynchospora alba, 189

Sabal glabra, 309, 315
Sabatia stellaris, 536
Sagina procumbens, 109
Sagittaria graminea, 539; latifolia, 539
Salicornia europaea, 530, 532, 534, 536; mucronata, 530, 536
Salix alba, 467; alba vitellina, 541; amygdaloides, 467; babylonica, 467; balsamifera, 466; Bebbiana, 445, 447, 467; brachycarpa, 450, 452; Caprea, 467; chlorophylla, 449; cordata, 114, 449, 467; discolor, 460, 467; eutawensis, 400; exigua, 467; Fendleriana, 467; flexuosa, 400; glaucops, 450; herbacea, 468; humilis, 466; irrorata, 450; lasiolepis, 467; Lesquereuxii, 400; longifolia, 298, 542; lucida, 542; lutea, 448, 467, Mackenziana; 467; monticola, 450, 466; Nelsoni, 467; Newberryana, 400; nigra, 303, 309, 315, 541; Nuttallii, 447; pachnophora, 450; padophylla, 448, 450; pedicellaris, 466; perrostrata, 445, 448, 450, 452; purpurea, 467; Scouleriana, 445, 447, 450, 466, 467; sitchensis, 467; taxifolia, 467; Wolfii, 450; Wrightii, 466
Salvia, 476; candicans, 476; Lemmoni, 476
Sambucus, 317; canadensis, 114, 542; melanocarpa, 445, 448, 450; microbotrys, 445, 448, 450; neomexicana, 448, 450
Samolus floribundus, 537
Sanguisorba canadensis, 189, 537
Sargassum Filipendula, 102, 104
Sarothra Drummondii, 312
Sarracenia, 327; purpurea, 189; Sledgei, 306
Sassafras, 317; acutilobum, 404; variifolium, 112, 533
Saxifraga, 468; heterantha, 472; Jamesii, 560; Mertensiana, 472
SCHAFFNER, J. H., The diecious nature of buffalo-grass, 119
Scirpus, 537; americanus, 535, 536, 539; campestris paludosus, 536; cyperinus, 541; heterochaetus, 189; nanus, 536; Olneyi, 536; robustus, 536; subterminalis, 190; validus, 541
Scrophularia occidentalis, 449, 543
Scutellaria Brittoni, 451; resinosa, 561
Scytosiphon lomentarius, 104, 106
Secale cereale, 416–418, 421
Seirospora Griffithsiana, 102
Selaginella, 310; Riddellii, 310; Underwoodii, 444
Senecio ambrosioides, 453; multicapitatus, 453; nephrophyllus, 451; pauciflorus, 450; praecox, 480; pseudaureus, 448, 451; triangularis, 450
Sequoia heterophylla, 398; minor, 398; Reichenbachii, 398
Sericotheca microphylla, 445, 448, 452
Sesbania, 300; Cavanillesii, 300
Sesleria dactyloides, 119
SETCHELL, W. A., Geographical distribution of the marine spermatophytes, 563
Shrubs of eastern North America, Notes on trees and, 581
Sida cuspidata, 561; stellata, 558
Sidalcea candida, 449, 451
Sideroxylon triflorum, 474
Sieversia ciliata, 446; grisea, 446
Silene antirrhina, 189; Hallii, 446; Scouleri, 446, 449, 453
Sisymbrium Nasturtium-aquaticum, 450
Sium cicutaefolium, 539
Smilacina racemosa, 189; stellata, 109
Smilax glauca, 109; rotundifolia, 533
SMITH, C. P., Studies in the genus Lupinus—V, 487
Solanum Jamesii, 561
Solidago canadensis, 27, 31; hispida, 189, 190; lanceolata, 111; nemoralis, 190; nitida, 306; odora, 306; puberula, 190; sempervirens, 109, 111, 530, 533, 536; serotina, 189
Sophia andrenarum, 453; incisa, 446, 449; leptophylla, 449; leptostylis, 453; magna, 453; procera, 446, 449
Sorbus scopulina, 445
Sorghum halapense, 298
Sparganium, 539
Spartina junciformis, 312; glabra, 525–528, 531, 535, 546; glabra alterniflora, 527; glabra pilosa, 527; Michauxiana, 533, 538, 542; patens, 312, 528, 529, 534, 544; patens juncea, 529
Specularia perfoliata, 448, 452
Spergularia marina, 536, 537
Spermothamnion Turneri, 102
Sphacelaria cirrhosa, 104

Sphaeralcea cuspidata, 561; stellata, 558
Sphaerocarpos, 284, 347, 350; californicus, 347; Donnellii, 347–357; Michelii, 284, 347; 349, terrestris, 285, 347; texanus, 347
Sphaerocarpos Donnellii, Regeneration in, 347
Sphagnum, 317
Sphenopholis, 474
Spilanthes repens, 312
Spiræa monogyna, 560
Spirogyra, 10; jugalis, 9; maxima, 9, 10; ternata, 9–20
Spirogyra ternata, Studies in the conjugation of, 9
Sporobolus airoides, 560; cryptandrus, 560
Spyridia filamentosa, 102
Stanleya integrifolia, 556, 560
Starch characters in corn, Inheritance of sugar and, 137
Starch gel, A method of preparation and some properties of a, 455
Stellaria Jamesiana, 560
Stenotus pygmaeus, 562
Sterigmatocystis nigra, 426
Stipa Porteri, 444; Richardsonii, 444; Scribneri, 446, 453
Stomata in ericaceous and other unrelated fruits, Internal, 213
STORK, H. E., Studies in the genus Taraxacum, 199
Streaming, The effect of zinc sulphate on protoplasmic, 425
Streptopus amplexifolius, 443, 450
Stylosanthes biflora, 306
Suaeda maritima, 530, 534
Sugar and starch characters in corn, Inheritance of, 137
Surirella Capronii, 70; **Palmeri**, 70, 72; splendida, 70; tenera, 70
Svida instolonea, 450
Swietenia, 416
Symblepharis Schimperianum, 384
Symphoricarpos racemosus, 214, 216
Symplocos tinctoria, 305
Synedra affinis Baileyana, 68; **anguinea**, 68, 72; **incisa**, 68, 72
Synthyris plantaginea, 558, 561
Syringa, 326
Syrrhopodon, 367; alabamensis, 381; badius, 392; Bernoullii, 368, 370, 396; Berterianus, 368, 373, 396; brachystelioides, 372; breviligulatus, 376; calymperidianus, 376; circinatus, 384; crispatus, 384; crispus, 382; decolorans, 372; Dussii, 376; elongatus, 369, 380, 396; **filigerus**, 369, 384, 389, 396; flavescens, 369, 376, 396; flexifolius, 380; floridanus, 368, 371, 396; fragilis, 384; Gaudichaudii, 368, 374, 379, 396; **graminicola**, 369, 379, 396; Hobsoni, 372, 373; Husnoti, 369, 376, 396; incompletus, 368, 372, 396; inflexus, 369, 375, 396; laevidorsus, 373; ligulatus, 369, 382, 396; longisetaceus, 370; lycopodioides, 369, 378, 396; martinicensis, 367, 368, 374, 396; Mohrii, 372; parasiticus, 369, 382, 396; parvulus, 376; Pittieri, 370; recurvulus, 369, 379, 396; rigidus, 368, 370, 396; Sartorii, 375; scaber, 376; scaber breviligulatus, 376; Schwaneckianus, 376; semicompletus, 372; Smithii, 389; strigosus, 384; subviridis, 376; tenuifolius, 369, 377, 396; texanus, 369, 381, 396; venezuelanus, 393

Taraxacum, Studies in the genus, 199
Taraxacum, 199–210, 218, 326; albidum, 199, 203, 207–209; confertum, 199, 203, 209; erythrospermum, 200, 201, 203–207, 210; laetum, 200; laevigatum, 206; lividum, 206; mexicanum, 206; oblanceolatum, 206; officinale, 199; officinale alpinum, 206; palustre, 206; platycarpum, 199, 203, 207, 209; vulgare, 199–201, 203–209
Taxodium, 317; distichum, 308
Tecoma, 252–254, 409–423; radicans, 315
Telesonix Jamesii, 557, 560
Tetraneuris brevifolia, 558, 562
Teucrium canadense littorale, 533, 537; laciniatum, 561
Texas, A week in eastern, 289
Thalassia, 563; testudinum, 564
Thalictrum Fendleri, 446, 451; megacarpum, 446, 449, 451; sparsiflorum, 445, 450; stipitatum, 446; venulosum, 446
Thallocarpus, 283; Curtisii, 285
Thelosperma gracile, 562
Thelypteris Dryopteris, 443
Thermopsis diversicarpa, 444; montana, 448, 452; pinetorum, 444
Thuja plicata, 128
Tiarella bracteata, 560
Tilia, 246; americana, 113
Tillaea aquatica, 538
Tillandsia, 296; recurvata, 296, 297; usneoides, 297, 309, 315
Tissues, The refraction of light in plant, 243
Tium alpinum, 445; scopulorum, 453
Tolu, 257
Tomato, The physical factors in the growth of the, 261
Tonestus pygmaeus, 562
Torresia odorata, 448
Tracheids and fibers, The silicious skeleton of, 407
Tragia ramosa, 561
Trautvetteria media, 444

Trees and shrubs of eastern North America, Notes on, 581
Tribulus terrestris, 298
Trichostomum Schlimii, 384
Trifolium dasyphyllum, 557, 561; hybridum, 218; nanum, 557, 561
Triglochin maritima, 530, 536, 537
Trillium ovatum, 445
Trochodendron, 414, 416, 424
Trollius albiflorus, 450
Tropaeolum majus, 325, 326
Tulipa Gesneriana, 213
Tumion carolianum, 398
Typha angustifolia, 537, 540; latifolia, 540

Ulmus alata, 308; americana, 303, 541; crassifolia, 298, 315
Ulothrix, 107
Ulva Lactuca, 104, 106, 524, 525, 528, 535, 545
Unifolium canadense, 189, 190
Uredineae, New species of—XII, 465
Uredo Bauhiniae, 472; **contraria,** 472; **laeticolor,** 473; **nitidula,** 473; Operculinae, 473; paranensis, 473; proximella, 471; Zorniae, 469
Uromyces Bauhiniae, 472; **imperfectus,** 472; minimus, 480
Urospora pencilliformis, 107
Utricularia, 190

Vaccinium canadense, 26, 190; corymbosum, 214, 215; Myrtillus, 214; nigrum, 190; oreophilum, 443, 452; ovalifolium, 189; pennsylvanicum, 27, 31, 189, 214, 215; scoparium, 443, 451; vacillans, 214; Vitis-idaea minus, 214, 216
Vagnera amplexicaulis, 445; liliacea, 445; stellata, 445, 448, 452
Valeriana micrantha, 449, 453; trachycarpa, 453
Vallisneria spiralis, 534, 539
Vaucheria Thuretii, 528
Vegetation of Connecticut, The—VII, 511
Veratrum speciosum, 445, 450
Verbascum Thapsus, 111
Verbena hastata, 114, 541
Vernonia altissima marginata, 561; marginata, 561; noveboracensis, 541
Veronica americana, 450; Anagallis-aquatica, 190; plantaginea, 558; serpyllifolia, 443
Viburnum dentatum, 542; pauciflorum, 443
Vicia, 326; americana, 452; trifida, 452
Viola canadensis, 443, 445; montanensis, 453; renifolia, 443; scopulorum, 444; Selkirkii, 443
Viorna Jonesii, 446; Scottii, 446
Vitis cinerea, 298, 300, 315; rotundifolia, 309

Water, 255
WEATHERWAX, P., A misconception as to the structure of the ear of maize, 359
WILLIAMS, R. S., Calymperaceae of North America, 367

Xanthium, 298
Xanthoxalis Bushii, 452

Zannichellia palustris, 535
Zapania cuneifolia, 561
Zea, 246; amylosaccharata, 139; Mays, 137–185, 359–362; Mays leucoceras, 145
Zinc sulphate on protoplasmic streaming, The effect of, 425
Zizania aquatica, 190; palustris, 535, 540
Zornia bracteata, 469; diphylla, 469; tetraphylla, 469
Zostera, 563; capricorni, 568, 569; japonica, 573; marina, 523, 524, 534, 565, 567, 569, 571–577; marina angustifolia, 572, 573; nana, 569; oregona, 573; pacifica, 569